

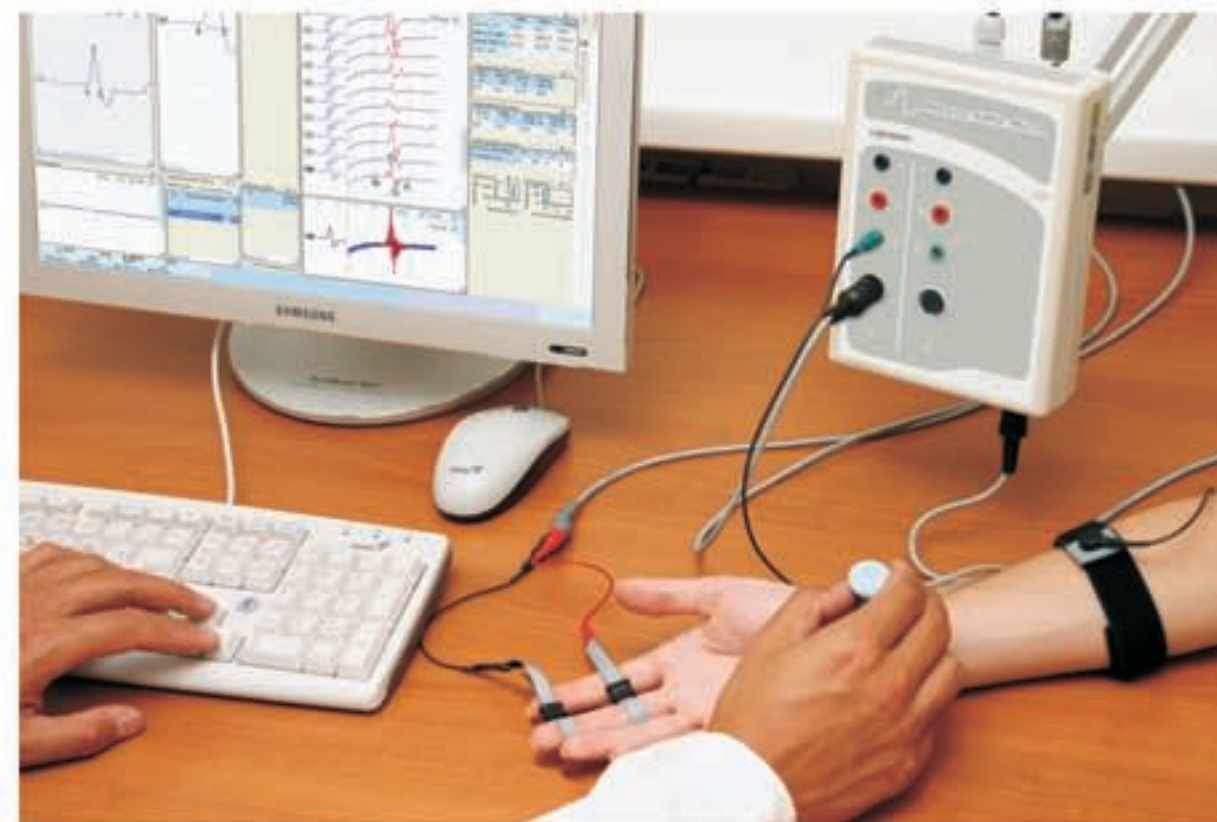
Base Delivery Set

- Electronic unit
- Holder
- Set of EMG electrodes:
 - Surface electrode – 2 pcs.
 - Bar electrode – 2 pcs. (pediatric and adult)
 - Ring electrode with cable
 - Ground electrode with cable (pediatric) (250 mm)
 - Ground electrode with cable (adult) (400 mm)
 - Reusable concentric needle electrode
 - Adapter for needle electrode connection
- Cup electrode with cable – 5 pcs.
- Pup-jack linker
- Stimulating bar electrode with replaceable steel and felt stimulation pads (adult)
- Headphones
- Measuring tape
- Electrode adhesive paste (100 g)
- Abrasive paste for skin preparation (160 g)
- Electrode gel (250 g)
- Software
- User and technical manuals
- Registration certificate
- Transportation bag



Neuro-EMG-Micro

2-channel digital miniature EMG system



With new software on .NET Platform

Extra Delivery Set

- Footswitch
- Temperature sensor
- Tendon hammer
- Dedicated keyboard
- **Neuro-EP** – software and equipment for short- and long-latency EP
- **Poly-Spectrum-Rhythm** – software and equipment for heart rate variability (HRV) analysis
- **Neuro-MS** – magnetic stimulator for diagnostic and therapeutic exposure on cerebral cortex motor zones, stimulation of spinal cord and peripheral nervous system

Neuro-EMG-Micro Specifications

EMG Channels

Number of channels	2
Sampling rate	40000 Hz
A/D converter	16
Input impedance	not less than 400 MΩ
Input range	20 μV – 50 mV
Noise level (rms)	not more than 0.5 μV
High pass filter	0.02 – 3000 Hz
Low pass filter	10 – 10000 Hz
Suppression ratio of power frequency by notch filter	not less than 25 dB
Common-mode rejection	not less than 100 dB

Electrical Stimulator

Stimulus amplitude	1 – 100 mA
Stimulus duration	100 – 2000 μs
Stimulation by impulse series:	
- pulse frequency in series	0.1 – 100 Hz

General Parameters and Specifications

Interface	USB
Supply voltage:	
- electronic unit	5 V DC
- desktop PC-based system	220 – 230 V AC (50 Hz) / 110 V AC (60 Hz)
- notebook PC-based system	220 – 230 V AC (50 Hz) / 110 V AC (60 Hz) / int. battery
Electronic unit dimensions	150x200x60 mm
Weight:	
- electronic unit	not more than 0.9 kg
- delivery set (without computer and printer)	not more than 4.8 kg
Safety	Class II, BF type



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Electroneuromyography

motor and sensory nerve conduction study (NCS), F-wave, H-reflex (also including paired stimulation), motor and sensory inching

Electromyography

spontaneous activity, interference curve, motor unit potentials (MUP)

Neuromuscular junction

repetitive stimulation, jitter

Additional EMG techniques

blink reflex, sacral reflex, bulbocavernous reflex, T-reflex*, galvanic skin responses

Somatosensory evoked potentials (SEP)

Transcranial magnetic stimulation (TCMS)**

Heart rate variability (HRV)***



Neuro-EMG-Micro Features

Electroneuromyography:

- registration and analysis of M-wave characteristics and sensory action potential
- evaluation of motor/sensory conduction velocity
- F-wave, H-reflex (also including paired stimulation) parameters study
- magnetic stimulation of spinal roots and peripheral nerves with the further classic analysis of motor response**
- blink reflex, sacral reflex, bulbocavernous reflex, T-reflex*, galvanic skin responses
- motor and sensory inching

Neuromuscular Junction Study:

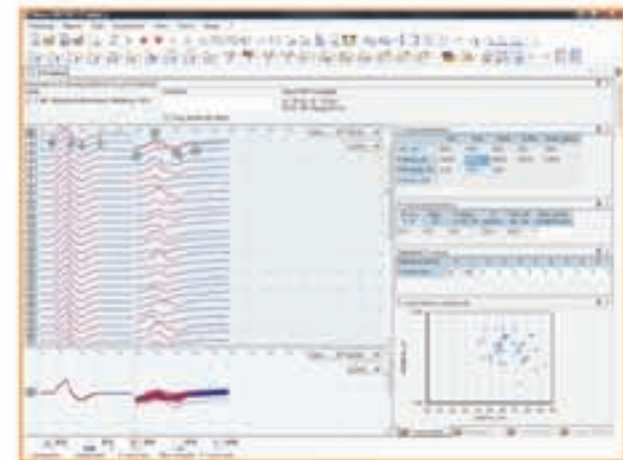
- analysis of M-wave decrement during repetitive stimulation of motor nerve
- tetanization and posttetanic phenomena study
- user-defined stimulation algorithm creation

Motor Unit Potentials (MUP):

- registration and analysis of spontaneous activity phenomena
- detection of MUP in automatic and manual modes
- automatic analysis of MUP parameters, determination of denervation-reinnervation process stage

Spontaneous and Interference Electromyography:

- spontaneous activity
- turn-amplitude analysis of interference EMG
- amplitude-frequency analysis of interference EMG
- spectrum analysis of interference EMG



F-wave

Transcranial Magnetic Stimulation**:

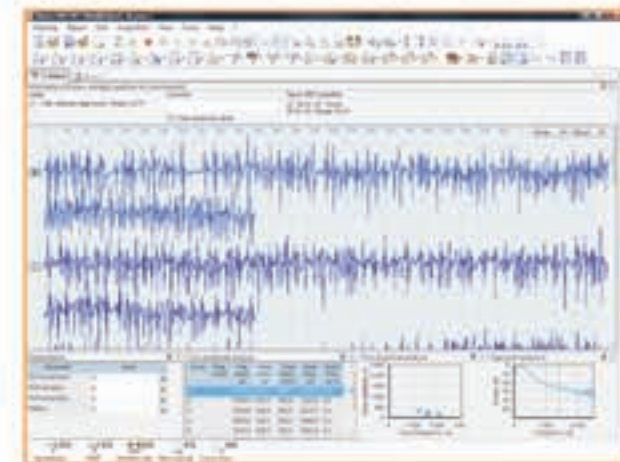
- determination of central motor conduction time of patients suffering from nervous system demyelination diseases, in particular, multiple sclerosis
- automatic calculation of root delay at F-wave and magnetic stimulation combined study

Somatosensory Evoked Potentials (SEP):

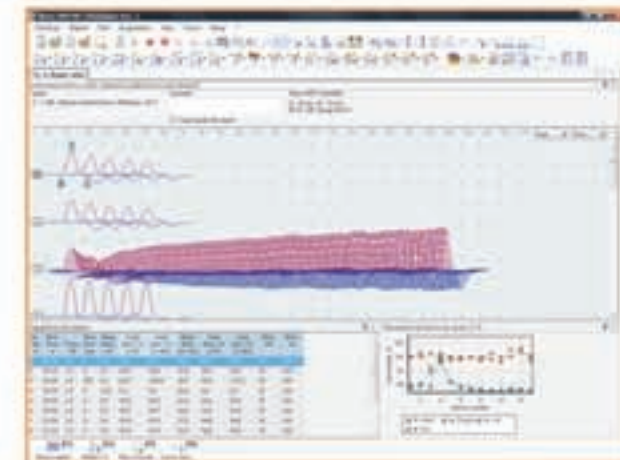
- short- and long-latency SEP

Heart Rate Variability***:

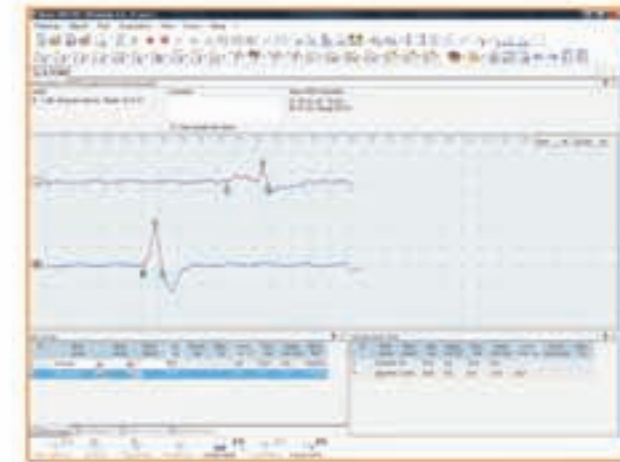
- frequency-domain analysis of heart rate
- cardiovascular reflex tests performing



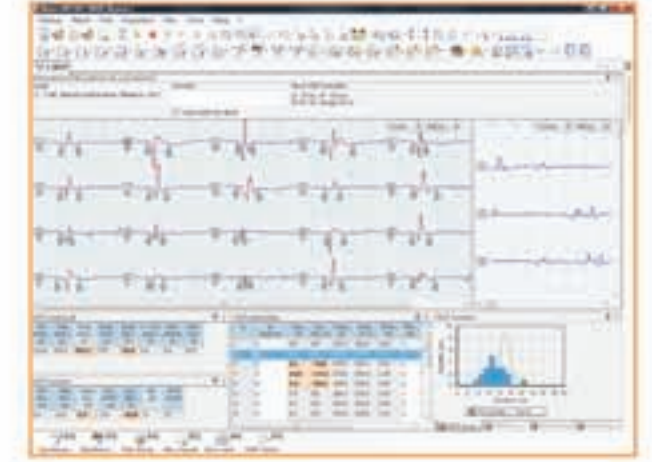
Interference EMG



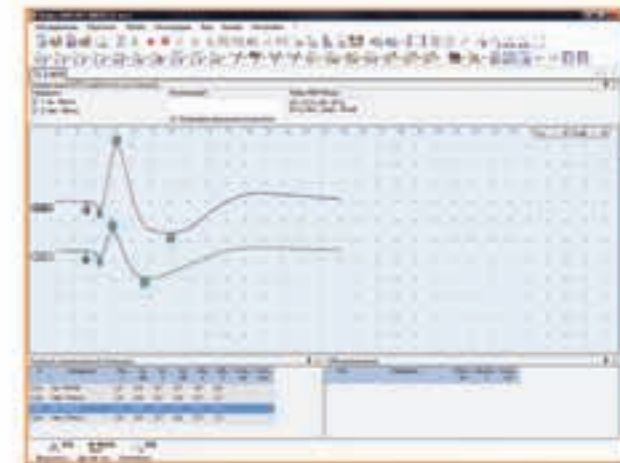
Repetitive stimulation



Transcranial magnetic stimulation



Motor unit potentials



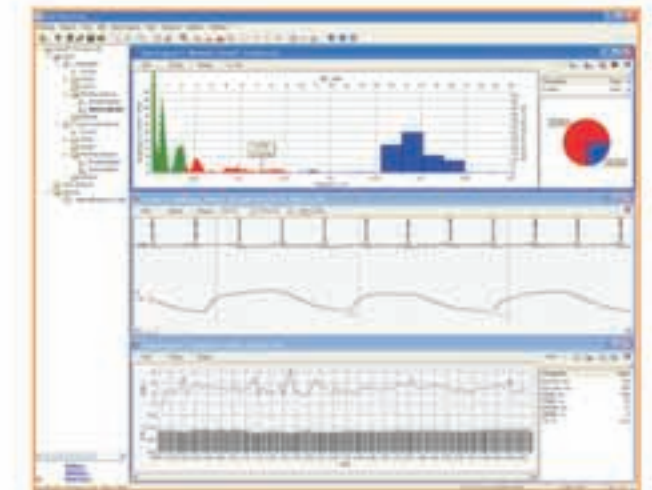
Galvanic skin responses



Somatosensory evoked potentials



NCS. Sensory conduction velocity



Heart rate variability

* if tendon hammer is available
 ** if Neuro-MS magnetic stimulator is available
 *** if corresponding accessories and software are available